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Introduction: Point of care ultrasound for assessment of undifferentiated hypotension and shock is part of the clinical scope of Emergency Physicians in Canada. The RUSH Exam outlines a systematic approach to these patients. A RUSH Exam educational model using didactic and hands on practice was developed and implemented for Emergency Medicine (EM) residents. This study evaluated the effectiveness of the module in a simulated setting on the following endpoints: improvement in image acquisition, interpretation, speed, and subjective comfort level, among EM residents with basic ultrasound training. **Methods:** Approval was received from the institutional health research ethics board for this before and after simulation study. Residents in the -EM Program or CCFP-EM Program from July 2014 to July 2015 were eligible to consent. Participants were excluded if they were unable to complete all portions. All residents were educated to the same level of introductory ultrasound training based on the curriculum in place at our institution. The 8-hour intervention included RUSH didactic and hands on small group sessions. Testing before and after the intervention was performed with the SonoSim Livescan training platform. Two evaluators scored each resident on the accuracy of image acquisition, image interpretation, and time to scan completion. A before and after survey assessed resident comfort level with performing ultrasound on an emergency patient in shock, and basing decisions on ultrasound findings. Statistical analysis was performed using McNemar's test for image acquisition and interpretation, a paired T test for time, and the Bahpkar test for the questionnaire. **Results:** 16 EM residents including 11 senior residents and 5 junior residents were enrolled. Improvement was achieved in the categories of IVC image acquisition and interpretation, as well as interpretation for B-lines, lung sliding, cardiac apical and parasternal long axis, and DVT ($p < 0.05$). Subjective comfort level of performing ultrasound in shock and basing decisions on the findings was increased ($p < 0.0001$). Among junior residents, there was an increased speed of image acquisition. **Conclusion:** With the introduction of the RUSH Exam educational module, EM residents showed improved image acquisition, image interpretation, speed, and comfort level when using ultrasound in critically ill patients.
Keywords: simulation, ultrasound, education

LO093

A national needs assessment survey for the development of a quality improvement and patient safety curriculum for Canadian emergency medicine residents

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Introduction: The Canadian Medical Education Directives for Specialists (CanMEDS) framework defines the competencies that postgraduate medical education programs must cover for resident physicians. The 2015 iteration of the CanMEDS framework emphasizes Quality Improvement and Patient Safety (QIPS), given their role in the provision of high value and cost-effective care. However, the opinion of Emergency Medicine (EM) program directors (PDs) regarding the need for QIPS curricula is unknown, as is the current level of knowledge of EM residents in QIPS principles. We therefore sought to determine the need for a QIPS curriculum for EM residents in a Canadian Royal College EM program. **Methods:** We developed a national multi-modal needs assessment. This included a survey of all Royal College EM residency PDs across Canada, as well as an evaluative assessment of baseline QIPS knowledge of 30 EM residents at the University of Toronto (UT). The resident evaluation was done using the validated Revised QI Knowledge Application Tool (QIKAT-R), which evaluates an individual's ability to decipher a systematic quality problem from short clinical scenarios and to propose change initiatives for improvement. **Results:** Eight of the 13 (62%) PDs responded to the survey, unanimously agreeing that QIPS should be a formal part of residency training. However, challenges identified included the lack of qualified and available faculty to develop and teach QIPS material. 30 of 30 (100%) residents spanning three cohorts completed the QIKAT-R. Median overall score was 11 out of 27 points (IQR 9-14), demonstrating the lack of poor baseline QIPS knowledge amongst residents. **Conclusion:** QIPS is felt to be a necessary part of residency training, but the lack of available and qualified faculty makes developing and implementing such curriculum challenging. Residents at UT consistently performed poorly on a validated QIPS assessment tool, confirming the need for a formal QIPS curriculum. We are now developing a longitudinal, evidence-based QIPS curriculum that trains both residents and faculty to contribute to QI projects at the institution level.
Keywords: quality improvement, patient safety, medical education

LO094

Mass casualty incident training for rural Canadian municipalities: a mobile education unit initiative

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Introduction / Innovation Concept: The Shock Trauma Air Rescue Society (STARS®) is a charitable, non-profit organization that is dedicated to providing a safe, rapid, highly specialized emergency medical transport system for the critically ill and injured. The STARS® Mobile Education Unit (MEU) is comprised of a high fidelity simulation suite that mimics a hospital emergency room, installed in a specially equipped motorhome (SEM) that can wirelessly operate a high fidelity human mannequin. The MEU provides an excellent opportunity to combine continuing medical education for resuscitation and MCI management. At present, no formal MCI education process exists in Saskatchewan. **Curriculum, Tool, or Material:** The Saskatchewan STARS® MEU delivers a phased MCI education initiative to rural and regional centers within the province. The educational initiative is sub-divided into three stages: 1. pre-exercise knowledge translation using a flipped classroom approach, 2. on-site tabletop exercise (TTX) and, 3. high-fidelity simulation session with a review of MCI management principles . Sites perform a Hazard Vulnerability Analysis (HVA) following stage 2 and the highest identified site-specific risks are utilized during the development of the simulated scenarios for stage 3. During stage 2, participants also complete a pre and post-exercise survey. The survey evaluates the educational component, the tabletop exercise component and the perceived pre and post tabletop exercise competencies for the management of MCI. In the pilot project, two regional sites completed the tabletop exercise. The pre-exercise survey evaluated perceived MCI and disaster preparedness for the region. Only 8% and 25% of participants at each site respectively, reported that their disaster plan had been trialed in tabletop, full exercise or real activation within the past three years. Participants strongly agreed that the tabletop exercise was a valuable experience (86% and 88% respectively). More robust data will become available as the initiative transitions out of the pilot stage to formal operations. **Conclusion:** A formal MCI training program implemented through the STARS® MEU for rural Saskatchewan municipalities enables participants and their organizations to both review and enhance their current emergency management plans. This